DECISION LENS

Providing Lifesaving Organ Transplants to Our Nation

The United Network for Organ Sharing (UNOS) is the private, non-profit organization that serves as the nation's Organ Procurement and Transplantation Network (OPTN) under contract with the Federal government, bringing together hundreds of transplant organ procurement professionals and thousands of volunteers to help make lifesaving organ transplants possible each day. Over the last 25 years, the number of organ transplants performed in the U.S. has doubled, but as long as there are people on the waiting list, there is work to be done.

Improving the System for Organ Allocation

The current system for matching donated organs to potential recipients included a classification system that consisted of dozens or hundreds of characteristics and classifications for each organ. Classifications included attributes such as blood type, age, and location. The result is that there are hard boundaries on the different classifications. For example, someone who qualifies for an organ 251 miles away is lower on the priority list than those who are only 249 miles away, even if other attributes were comparatively more urgent.

"There are many ethical issues inherent in allocating organs," James Alcorn, Senior Policy Strategist for UNOS, said. To make the process more fair and flexible, the OPTN Lung Transplantation Committee is developing a continuous distribution system based on assigning points for different attributes, rather than having hardline classifications for each of the factors involved. This way the allocation system would be able to account for all factors simultaneously, accounting for the importance of each factor in determining where a patient falls on the list.

Community feedback was necessary in order to rank different attributes against each other and then assign point values to the attributes. Alcorn was familiar with prioritization best practices and the Analytical Hierarchy Process (AHP), a science-based method for making decisions. He wanted a solution that would allow them to collect, rank, and analyze data from a large number of stakeholders quickly.

Creating a Continuous Distribution Framework for Organ Allocation

All organ allocation systems will transition to continuous distribution, but lung will be the first.

UNOS partnered with Decision Lens to collect the feedback necessary to prioritize attributes against each other and assign points to those attributes.

The organ donation and transplantation community of professionals, patients, and patient organization partners is highly engaged. Hundreds of individuals signed up to participate in the exercise. Patient organization partners were able to share additional invitations through their patient networks.

Almost 200 participants were able to login and use the system. UNOS had researched a few different AHP tools, prior to choosing Decision Lens and liked the easy-to-use user interface for volunteers viewing reports and for the patients and transplant professionals participating.

"I like the flexibility in the model. It's a very easy to learn tool," Alcorn said.

More Flexible Organ Distribution

Based on modeling, the waitlist declined considerably in all continuous allocation scenarios compared with current rules. These changes to the system and policy are still in review, but show promise for more flexible distribution and, ultimately, more lives saved. Alcorn hopes for the new lung system to be implemented by 2022. They have plans to conduct similar AHP sessions with Decision Lens, leveraging the larger community to ensure more equitable transplants for all organs over the next five years.

"It is really meaningful work and this has been a fascinating project. It's been great to team up with Decision Lens to make this happen," Alcorn said.